

*Research Article***Implications Of Illegal Community Mining For Economic Development In Bangka Regency, Indonesia****Derita Prapti Rahayu<sup>1\*</sup>, Sri Rahayu<sup>2</sup>, Faisal<sup>3</sup>, Cahya Wulandari<sup>4</sup>, Muhamad Sayuti Hassan<sup>5</sup>**<sup>1,3</sup>Faculty of Law, Universitas Bangka Belitung<sup>2</sup>Faculty of Law, Universitas Jambi<sup>4</sup>Faculty of Law, Universitas Negeri Semarang<sup>5</sup>Faculty of Law, Universiti Kebangsaan Malaysia

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**ABSTRACT**

The Kepulauan Bangka Belitung Province, Indonesia, is renowned for its extensive history of tin mining, a pivotal component of the local economy. Notably, this mining encompasses operations conducted by both corporate entities and individual community members, shaping the region's socio-economic landscape. This research seeks to investigate the multifaceted implications of community-led tin mining activities in Bangka Belitung. Employing a qualitative and socio-legal approach, the study underscores its significance in the acquisition of high-quality data derived from site visits, comprehensive surveys, and interviews with the diverse local community, encompassing various subsistence groups and socio-economic backgrounds. Our findings indicate that individual community mining activities have indeed contributed positively to the economic growth of the Kepulauan Bangka Belitung Province, particularly in the Bangka Regency. However, they also manifest negative repercussions in terms of illegal mining, which adversely affects state revenue due to unregistered taxpayers. Furthermore, these activities hinder human resource development and highlight a deficiency in the supervision of reclamation efforts undertaken by artisanal mining operators. Therefore, the study emphasizes the imperative for government intervention, focusing on community mining permits to enforce reclamation regulations and ensure sustainable, responsible mining practices.

**Keywords: Tin Mining; Illegal Community Mining; Economic Impact; Development.****A. INTRODUCTION**

Recently, the escalation of conflict between mining companies and communities can change the condition of an agrarian society into a mining community and have a bad impact on the environment and can also change the ecological conditions in the mining area (Faisal, Satrio, & Ferdian, 2020). Community mining is only given to residents, both individuals and community groups and cooperatives. Permit granted to business actors to carry out mining business in

smallholder mining areas with limited area and investment (Ali, 2020).

Community mining is regulated in Articles 20 to 26 regarding People Mining Area (*Wilayah Pertambangan Rakyat / WPR*) and Articles 66 to 73 concerning IPR in Law No. 4 of 2009 concerning Minerals and Coal. Several articles of the law also regulate community mining regarding the authority of regional governments as mining managers in the regions, land holding IPRs, capital assistance for community mining, and

others. However, Law No. 3 of 2020 concerning Minerals and Coal appears, which contains several changes. The fundamental change is the abolition of the regional government's authority as mining manager (Agustian, Salfutra, & Robuwan, 2021).

The revision of the new Minerals and Coal Law has indeed ushered in a significant expansion of opportunities for business actors to harness the full potential of their companies. However, the absence of stringent regulations aimed at ensuring the maximization of state revenues and the preservation of the environment, in addition to prioritizing the welfare of local communities, raises concerns of the potential for this law to inadvertently mirror regulatory frameworks that primarily serve the interests of powerful capital entities, leading to systematic and large-scale exploitation of the nation's mining wealth (Umam, 2020).

However, it is crucial to acknowledge that unlicensed mining operations continue to persist in practice (Yanto, Salbilla, & Sitakar, 2023). While the stated aims and objectives of granting community mining permits hold the potential for positive societal impact, such as economic improvement, social issue mitigation, job creation, enhanced entrepreneurial spirit, urbanization control, environmental damage management, knowledge and technology transfer, and increased regional income (Citranu, 2020). The empirical data further underscore the region's heavy economic reliance on the tin sector. As an area where 95% of the production is earmarked

for export commodities, Original Regional Revenue (PAD) from the tin sector has exhibited fluctuating contributions, spanning between 20-30% over the past decade, from 2010 to 2020 in Bangka Belitung (Ahmad, 2022). Data from the Bangka Belitung Provincial Manpower Office in 2022 indicates that approximately 24.3% or around 344,430 people out of the total working population are employed in the mining sector, the majority of which operate on a small scale and often illegally. This underscores the high degree of economic dependency of the Bangka Belitung community on the tin sector.

The current issue revolves around the reliance of certain individuals in Bangka Belitung on community mining, particularly within the context of the Community Mining Area (WPR). This reliance on community mining has become a significant pillar supporting the local economy. It's noteworthy that this community-based economy plays a crucial role in elevating the economic well-being of indigenous peoples, such as the Lom tribe in the Teluk Kelabat area, and, more broadly, indigenous communities in the region (Ibrahim, Haryadi, & Wahyudin, 2018). This is of paramount importance when viewed from the perspective of reducing economic disparities, alleviating poverty, and addressing unemployment issues, all of which align with the founding principles of Indonesia, as articulated in the fourth paragraph of the Preamble of the 1945 Constitution (Rompas, 2018).

However, it is pertinent to note that the involvement of the Lom tribe in illegal tin mining

around Teluk Kelabat has had a positive impact on the local economy, particularly during the economic downturn resulting from the COVID-19 pandemic (Yanto et al., 2023). This scenario has witnessed a shift in livelihoods, as some individuals transitioned from traditional occupations like fishing and farming to illegal mining. Nevertheless, these transitions have also given rise to social conflicts between the mining community and local fishermen (Haryadi, Ibrahim, & Darwance, 2022).

Local governments often encounter a common challenge in their development efforts: a lack of comprehensive information about the region's economic potential and development prospects. This deficiency can result in the formulation of development programs that are primarily politically motivated, rather than grounded in scientific analysis. Consequently, this research seeks to shed light on the decision-making processes employed by the government, particularly concerning community development (Jamin et al., 2023).

This situation prompts critical questions, which form the basis of our research inquiry, regarding the ramifications of smallholder mining for the economic development of Bangka Regency (Sholihin, 2021). We aimed to explore how community mining influences the region's economic landscape. In addition, we endeavor to identify viable solutions that can be implemented to enhance the connection between community mining activities and the overall economic development of the local community. This

research serves as a critical investigation into the interplay between small-scale mining and economic growth, offering insights that can inform more informed and effective decision-making by local authorities in their development initiatives.

This forthcoming study builds upon a rich foundation of previous research. It delves into a significant knowledge gap identified through an examination of prior studies in the field. Dwi Haryadi, Ibrahim, and Darwance's research in 2022 illuminated the importance of environmental law awareness as a strategic element in unconventional tin mining activities in Bangka Belitung. This body of work underscores the need to elevate environmental consciousness as a means to combat illegal mining issues in the region (Haryadi, Ibrahim, & Darwance, 2022). In addition, Thomas and Redi's study from 2020 explored the effectiveness of implementing criminal sanctions in unpermitted mining operations in Belitung district, revealing the complexities arising from the interplay of local economic dependency and legal culture. This highlights the necessity for legal solutions aligned with the protection of local social and economic interests (Thomas, & Redi, 2020).

A study conducted by Rezki Syahrir, Francis Wall, and Penda Diallo (2020) underscores the complex and dynamic relationship between mining, economic sustainability, and local communities. The case of Singkep Island serves as a cautionary tale, emphasizing the need for effective resource governance and sustainable development

strategies in regions heavily reliant on extractive industries. It highlights the importance of considering not only national-level analyses but also regional studies to gain a comprehensive understanding of the socio-economic impacts and sustainability challenges associated with mining activities. The transition from mining-dependent prosperity to long-term post-closure challenges observed in Singkep Island offers valuable lessons for policymakers, researchers, and stakeholders involved in the management of finite natural resources and the well-being of local communities (Syahrir et al., 2020).

The research by Isma Rosyida, Wahidullah Khan, and Masatoshi Sasaoka in Bangka Island, Indonesia, uncovers the issue of 'grey participation' in coastal tin mining. It highlights the unequal distribution of impacts and benefits, inadequacies in public consultations, and the emphasis on community benefits over risks by mining companies. The study's recommendations call for fair resource management and good governance. It serves as a vital call to ensure equitable development and well-being for coastal communities and the environment (Rosyida, Khan, & Sasaoka, 2018). Finally, the study by Andri Yanto and colleagues in 2023 delved into the urgency of revitalizing local authority in the context of IPR permitting as a means to combat the widespread issue of illegal mining following the enactment of Presidential Regulation No. 55 Tahun 2022 (Yanto et al., 2023).

While these studies provide essential insights into various aspects of mining, regulation,

and governance in the Bangka Belitung region, the forthcoming research seeks to bridge the gap by investigating the implications of illegal community mining on economic development and regional revenue, offering fresh perspectives and potential solutions in the pursuit of economic sustainability in the region.

## B. RESEARCH METHODS

This research was conducted from April to July 2021 and was strategically crafted to employ a qualitative socio-legal approach, combining contextual analysis and empirical research. This methodological choice was intentional as it allowed for the flexibility required to conduct a comprehensive examination of a diverse range of data without imposing predetermined constraints (Benuf, & Azhar, 2020). This approach involved delving into the contextual factors and conducting empirical research to gain insights into the complex interplay between legal systems and the societal realities they intersect with.

The data collection involved deep interviews conducted using purposive sampling, direct observations at mining sites, and the compilation of relevant documentation. The primary focus of this research was to assess the environmental and social impacts of tin mining activities and to understand how recent governmental changes in mineral and coal legislation have influenced these impacts.

The research sample comprised a total of 30 informants, categorized as follows: 15 individuals engaged in illegal mining, 8 village

heads or local government officials, 5 purchasers of tin from mining activities, and 2 officials from regional government bodies responsible for mining affairs. These informants were selected based on their relevance to the research objectives and their roles in the local mining context.

To ensure methodological rigor, this study aligned with theoretical tools and employed a credibility comparison approach through triangulation techniques. Triangulation was employed to cross-verify and complement information, resulting in methodologically sound inferences and robust research findings.

By specifying the time frame of the research and providing a clear breakdown of the informant categories, this revised methodology offers a more comprehensive and transparent account of the research approach, ensuring clarity and validity in the data collection and analysis process.

### C. RESULT AND DISCUSSION

Bangka Island has a long history as one of Indonesia's major tin producers, with mining activities dating back to the Dutch colonial era (Rosyida et al., 2019). The primary mining area is currently under the control of PT. Timah Tbk, the state-owned tin mining company. In addition to PT. Timah Tbk, there are private smelters and community miners, often referred to as unconventional miners (Ferdiana, 2020).

Before the amendment and implementation of Law No. 3 of 2020, there were significant

changes in the regulatory framework for mining in Indonesia. Law No. 4 of 2009 governed Mineral and Coal Mining and granted licensing authority to local governments. The Indonesian tin mining sector has undergone various governance approaches over the years since the end of colonial rule. Initially, three tin mining companies under Dutch ownership were nationalized and merged in 1958, forming the State Tin Company (*Perusahaan Timah Negara*) in 1968 (Prianto, & Husnah, 2017). For the next 31 years, the Indonesian government exercised complete control over tin mining as a strategic resource (Ahmad, 2022). The government's policy of maintaining centralized control over tin mining faced challenges, particularly as global market prices declined in the early 1980s. Despite maintaining consistent tin production levels, state revenue plummeted significantly over the next decade. This had a direct impact on national income, living standards, commodity and food scarcity, inflation, and widespread political unrest extending until 1998.

In 1999, the government initiated a reconfiguration of tin mining by designating tin as an export commodity no longer regulated and supervised by the central government. Law No. 22 of 1999 on Regional Government delegated authority to regional governments to regulate and manage mining within their respective regions. This was part of the broader regional autonomy project (Erman, 2022). The political shift towards decentralization in the early years of reform aimed to reduce the centralized authority that had been

in place during the New Order era while providing regions with the space to independently develop their economic potential. Post the Regional Autonomy Law No. 34 of 2002, regions had extensive authority to manage, regulate, and supervise mining activities. However, this authority was gradually curtailed through Law No. 4 of 2009, Law No. 23 of 2014, and Law No. 3 of 2020, which revoked regional authority and returned it to the central government (Yanto, Salbilla, & Sitakar, 2023).

However, Law No. 3 of 2020 altered this arrangement, centralizing authority over mineral and coal control rights under the central ministry. This change was explicitly stated in Article 6, directing the integrated management of mining activities under the central government's sole authority.

This change in regulatory authority applies to all licensing regimes, encompassing mining business permits (*Izin Usaha Pertambangan/IUP*), special mining business permits (*Izin Usaha Pertambangan Khusus/IUPK*), and the community mining permits (*Izin Pertambangan Rakyat*) (Ranggalawe, Susanti, & Fahmi, 2023). Initially, under Law No. 4 of 2009 concerning Mineral and Coal Mining, Article 8 granted attributional authority to district and city local governments for the issuance of IUP and IPR permits, while the provincial government held the authority to issue IUP permits. However, in the new Mineral and Coal Law, both Article 7 and Article 8 have been repealed or removed. This signifies a shift in the

regulatory landscape, transitioning from a decentralized permitting system to a centralized one.

As a consequence of centralizing the permitting process (Gumilang, Oktaviani, & Suswinda, 2022), regional governments find themselves with limited capacity to address disputes arising from the activities of mining companies, whether these disputes relate to environmental degradation or legal conflicts. It is important to note that most mining sites are situated in remote, often marginalized areas. This regulatory framework deviates significantly from the principles of good governance, as it leaves communities in mining areas with limited recourse when their environment is adversely affected by the actions of mining companies. In this context, regional governments must be empowered to leverage existing legal frameworks and local traditions in Bangka Regency, as long as these customs and traditions do not pose a threat to the integrity of the Unitary State of the Republic of Indonesia (Rahayu, 2016).

In 2023, PT. Timah holds 127 IUPs covering a total area of 473,388 hectares, while other private companies possess 517 IUPs with a combined area of 572,631 hectares. It's crucial to emphasize that, under the derivative regulations of Law No. 3 of 2020, regional governments lack jurisdiction over all these IUPs. Their authority extends only to the community mining permits (*Izin Pertambangan Rakyat/ IPR*), not the permits held by corporate entities (Yanto, Salbilla, & Sitakar, 2023).

The significance of local government involvement in mine management, as emphasized by Riqiey and Zainulla (2022), encompasses several crucial aspects. Firstly, it aligns with the constitutional mandate, granting regional governments the broadest possible autonomy. This autonomy allows them to actively participate in the regulation and supervision of mining activities within their jurisdictions.

Secondly, local government engagement reflects the adoption of a system of shared authority, rather than a rigid separation of powers. This approach acknowledges the pivotal role of local governments in shaping mining policies and governance within their regions.

Furthermore, local governments are better positioned to provide comprehensive oversight of all mining operations in their areas. This oversight ensures that mining activities adhere to both environmental regulations and legal standards. In cases where local community members are adversely affected by the actions of mining companies, local governments can take prompt and effective action, facilitating timely resolution and support for affected individuals and communities.

Lastly, local government involvement serves as a preventative measure against the concentration of power and wealth in the mining sector. By doing so, it helps mitigate the risk of mining oligarchies emerging and potentially exploiting local resources to the detriment of the broader community.

## 1. Motivations Behind Community Mining Activities in Bangka Regency, Indonesia

In the second quarter of 2018 and 2019, mining companies contributed 7.77% and 7.38%, respectively, to Indonesia's GDP. Concurrently, in 2017, these companies employed a workforce of 935,753 (BPS, 2019). However, the communities residing in the proximity of these mining operations continue to experience adverse effects, primarily stemming from environmental degradation. The Ministry of Environment and Forestry reported that between 2017 and 2018, eleven mining companies were found culpable for environmental pollution, leading to various sanctions (Nuswantara & Pramesti, 2020).

It is crucial to underscore that companies should not exclusively prioritize the interests of internal stakeholders, such as management and shareholders. Instead, they should give paramount importance to environmental sustainability and the well-being of the community (Amalia, Samekto, & Prihatin, 2016). By adhering to these fundamental principles, companies can conduct their business activities responsibly, thereby reducing conflicts with local communities and minimizing adverse environmental impacts. To realize this, companies need to proactively communicate their dedication to corporate social and environmental responsibility.

Artisanal and small-scale mining is prevalent worldwide, extending across Latin America, Africa, Asia, and Oceania (Kaur & Diehl, 1996). This practice has been passed down through generations within local communities and

is often driven by factors like poverty and a lack of alternative employment opportunities (Nugroho, 2020). Several changes in the regulations governing small-scale mining, following the implementation of new legislation, have brought unwelcome challenges for small-scale miners.

One significant change is the removal of the regent/mayor's authority to determine the Community Mining Area (WPR). In addition, the new prerequisites have made it even more challenging to establish a WPR. Previously, Article 22 stipulated a maximum depth of 25 meters for primary metal or coal reserves, but it has since been extended to 100 meters. This alteration presents considerable difficulties for small communities with limited resources in mapping and understanding the extensive distribution of metal reserves at this increased depth.

In the same article, there is another notable change related to the determination of community mining areas. The new regulation now mandates a maximum area of 100 hectares, which is a significant increase from the previous requirement of just 25 hectares. This raises concerns regarding how small communities can effectively manage such a substantial area, especially when the 100-hectare limit has been set due to potential technical difficulties in the field.

Furthermore, the recent regulation eliminates the condition that previously required community mining activities to have been carried out in a specific area for at least 15 years as a prerequisite for determining a Community Mining

Area (WPR). The revised criteria now stipulate that proposed WPRs must meet spatial and area utilization standards for mining business activities (Rahayu, & Faisal, 2021).

The people engaged in mining activities face even greater challenges when it comes to applying for a Community Mining Permit (IPR) under the new law (Faisal, Rahayu, & Yokotani, 2022). The recent legislation only allows individuals and cooperative members who are residents to apply for an IPR. In contrast, the previous law permitted community groups to apply for such permits, but this provision has been revoked. This unlicensed mining practice constitutes a violation of Law No. 11 of 1967, which pertains to Basic Mining Provisions. In addition, it disregards the provisions of Law No. 23 of 1997 on the Environment and the Regional Regulation of the Governor of Bangka Belitung No. 03/2004, which addresses general mining business management. This deviant behavior is evident in unauthorized tin mining activities carried out in areas already under the ownership of mining companies and in productive areas where Tin Ingots (TI) mining, also known as Unconventional Mining, leads to environmental damage.

Nevertheless, the people of Bangka persist in engaging in unlicensed mining activities. Tin mining in Bangka Belitung Province has been a longstanding tradition, dating back tens or even hundreds of years. As a result, it has become an ingrained cultural practice within the community (Murty, & Yuningsih, 2017).



The persistence of tin mining activities in the coastal areas of Air Anyir Beach, Merawang, Bangka, as reported by interviewees is primarily driven by economic necessity. Many of these miners are also farmers, but the income from farming is insufficient to meet their needs. Consequently, they resort to mining during holidays and idle periods. Obtaining mining permits has proven to be a challenging endeavor due to a lack of effective communication or socialization efforts by local or central government authorities regarding permit changes. This has led to the continuation of unauthorized mining activities (Zarmawi, & Haryanto, 2023).

In the initial stages of these activities, there were no official warnings or crackdowns from the government, as the land used for mining was newly acquired and privately owned. While some miners engage in basic reforestation efforts after mining, others merely backfill the excavations with soil (Ghaziani et.al, 2023).

The miners' collective hope is that the government will allocate secure and accessible mining areas, especially for the local communities, as mining currently constitutes their primary source of income. They also express the desire for simplified permit procedures for Community Mining Areas (WPR) to enable legal mining operations and provide a sense of security (Putri, & A.L.W, 2015).

Livelihoods are integral to ensuring the economic well-being of individuals, enabling them to fulfill their fundamental needs. The specific type of livelihood within a community is contingent on

factors such as the region's natural resource potential and the educational and skill levels of its residents (Jamaluddin, & Kasim, 2019).

In the case of Kemingking Village, the interviews with the informants Sutrisno, Mardiono, and Sudarmin revealed that their engagement in mining activities has spanned generations, passed down within their families. For these individuals, mining has become a way of life due to their expertise and experience, often extending over several decades. Regional authorities frequently issue warnings about their illegal mining activities, utilizing measures such as verbal warnings, activity cessation orders, and the confiscation of mining equipment. However, the enforcement of these measures is inconsistent, and not all miners face punitive actions from the local government.

The income generated from these illegal mining activities amounts to at least IDR 1,000,000 per week, which is considered sufficient by the community to meet their daily needs. This income can increase up to threefold, further solidifying the perception that tin mining represents a promising and indispensable livelihood source for the community.

The government of Bangka Belitung should focus on disseminating critical information to individuals involved in illegal mining activities. This information should emphasize the significance of acquiring permits for all mining actors, whether they are ordinary individuals or capital owners. The communication should also cover the necessary procedures for obtaining

these permits, and associated processing costs, and should consider the challenges faced when trying to access permits, particularly in remote areas. Those engaged in illegal mining activities should not only be mindful of their benefits but must also prioritize environmental protection and the welfare of the broader community.

The tin mining industry in the Kepulauan Bangka Belitung, known as Indonesia's primary tin producer, has witnessed significant challenges in recent decades. These challenges encompass various aspects, including mining operations, management, the economy, and notably, environmental concerns. Mining conflicts have become a persistent issue. This is understandable since tin mining is the economic backbone of Bangka Belitung and plays an irreplaceable role in its economic landscape. Tin contributes to more than 80 percent of the region's total exports, and it is also a major source of Indonesia's tin exports.

Miners in the region primarily rely on information about mining permits from PT. Timah. However, they have limited knowledge of the formal statutory regulations regarding mining permits. Obtaining permits poses a considerable challenge for miners, particularly due to a policy issued by the local village government that allows mining without permits. This policy has led to a lack of awareness among miners regarding the importance of adhering to formal regulations and the procedural aspects of acquiring permits. It is worth noting that some miners have made efforts to improve the environment by engaging in

reforestation activities after mining operations (Imamulhadi, 2021).

The study revealed several economic factors influencing community mining activities, including disorientation in tin management, the abundance of tin resources, regions susceptible to smuggling, community economic requirements, limited legal and environmental awareness, inadequate guidance and supervision, and ineffective law enforcement. Illegal mining, as observed in this context, refers to mining or quarrying activities undertaken by communities or companies without the necessary permits and without adhering to the principles of proper and ethical mining practices (Good Mining Practice).

Recognizing these contributing factors, future endeavors aimed at addressing illegal mining must address the root causes of these issues. This implies adopting an approach that extends beyond repressive measures governed by criminal law. Instead, a more strategic and preventive approach is necessary. Key components of this approach include educating stakeholders about mining licensing procedures, promoting environmentally responsible mining practices with minimal adverse impacts, and encouraging post-mining reforestation efforts.

## **2. Implications of Community Mining for Community Economic Development in Bangka Regency**

The mining and mineral processing sector is not only a vital contributor to a nation's economy but also a critical supplier of resources essential for the functioning of modern society.

Beyond these immediate advantages, this industry plays a pivotal role in fostering sustainable economic development and bolstering overall GDP growth. As the world faces mounting pressure to meet the demands of sustainability, the World Economic Forum has set an ambitious target to achieve global mining sustainability by 2050. Several key objectives need to be met, necessitating concerted efforts from the Ministry of Energy and Mineral Resources in the industrial mining sector. These objectives revolve around drivers of change, transitional pathways, future resource scenarios, and action plans (Farjana et al., 2019).

Concurrently, as demand and economic growth surge, the environmental footprint and associated ramifications have also witnessed exponential growth. Sustainable development, in essence, seeks to strike a harmonious balance between economic activities and environmental considerations. Within the mining industry, the pursuit of sustainable development involves augmenting metal production while ensuring cost-effectiveness and efficiency, all while minimizing adverse impacts on future generations. To illustrate these concepts in practice, we can examine real-world cases of mining companies adopting eco-friendly practices and the transformative effects of sustainable mining on local economies and ecosystems.

For individuals struggling to secure conventional employment opportunities, mining becomes their lifeline. In their circumstances, tin mining stands as the sole means of sustenance,

providing them with the financial support they desperately need. Particularly in Bangka Belitung, a region renowned for its tin production, this industry represents a significant and promising avenue for its residents. Even in the face of its illegality, many persist in this profession because it is their area of expertise. According to the 2021 Economic Report Book of the Bangka Belitung Province published by Bank Indonesia (Nugraheni, 2021), the province's economy exhibited positive growth. This was primarily attributed to the expansion of tin mining and quarrying businesses, coupled with an uptick in the market prices of mining products. Community mining plays an integral role in propelling the economic cycle of Bangka Regency. The economy of the Kepulauan Bangka Belitung Province surged by 6.85% year-on-year, marking a 0.97% increase from the preceding quarter. While these individuals might prefer other opportunities, the constraints they face render mining their primary and often only viable option.

The mining industry stands as one of the key economic sectors upon which the Indonesian government relies for foreign exchange earnings, employment generation, and as a source of Regional Original Income (Suharizal, & Chaniago, 2017). The Kepulauan Bangka Belitung Province, Indonesia's primary tin-producing region, with exports amounting to US\$93.4 million in 2019, has long been dependent on the mining sector for its economic sustenance. Regional government data suggests that between 30% to 40% of the region's income is derived from tin mining.

However, a recent graphical trend indicates a decline in this contribution. This drop in percentage, averaging 5.64% annually, from an initial 39.69% in 2017 to 31.45% in 2018, is not a reflection of decreased activity but rather an increase in regional budgets and advancements in other economic sectors. Despite this shift, tin has historically served as the economic backbone of the Bangka Belitung residents.

Apart from heightened economic growth, community mining activities have also brought forth positive impacts, as evidenced by the findings of Saleh et al. (2020):

- a. Elevating the standard of living and welfare of the community
- b. Augmenting Regional Original Income (when the mining activities are legal)
- c. Creating job opportunities and fostering employment
- d. Reducing instances of criminal activities in the surrounding environment.

It is important to distinguish the implications for economic growth from those for economic development. Economic development involves the critical aspect of harmonizing growth with environmental preservation efforts. Development that overlooks these two dimensions may yield future challenges. In essence, economic development that prioritizes profit without due regard for the sustainability of nature and the environment will not only have adverse consequences for the environment but also for human well-being (Putri, 2019).

The prevailing trajectory of global economic development has been giving rise to new challenges, thereby placing the onus on governments to chart the course for future progress. Consequently, these challenges necessitate comprehensive exploration to formulate economic, social, and ecological policies that align with the objectives of sustainable development. Following the European Union Agenda (Vasylieva et al., 2019), sustainable development serves as the fundamental guiding principle for shaping and executing policies across all sectors. It facilitates the enhancement of a nation's competitiveness and the creation of improved conditions for both businesses and the well-being of communities. The EU government, therefore, views the adoption of renewable energy as a means to alleviate not only the adverse effects of climate change but also to yield direct and indirect economic benefits by diminishing reliance on imported fuels. The Indonesian government should likewise research community mining activities to incorporate findings into decision-making processes. It is undeniable that mining activities while yielding short-term profits, can lead to far-reaching and extensive environmental challenges (Halim, Waskitho, & Prakosa, 2019).

Previous research on mining in Nigeria also highlights that the consequences of illegal mining encompass three key aspects: (1) the physical environment, (2) the biological environment, and (3) the aquatic environment. These detrimental effects result from the absence of proper

oversight of illegal mining, which consequently leads to a lack of environmental responsibility, including the neglect of post-mining reclamation efforts (C.O, & T.A, 2021).

The regulations governing reclamation are outlined in the Minister of Energy and Mineral Resources Regulation Number 18 of 2008, which pertains to reclamation and mine closure. Reclamation is a process aimed at enhancing or managing the use of land that has been disturbed due to mining activities so that it can serve its intended purpose efficiently (Prayoga, 2018). Several critical considerations regarding reclamation implementation include the following: Reclamation should commence no later than one month after the cessation of mining activities on the disturbed land. This includes both land within former mining areas and land situated beyond them. The latter category encompasses areas such as overburden piles, stockpiles of raw or production materials, transportation routes, processing and refining facilities, offices and housing, as well as ports and docks.

Referring to the previously described phenomenon, it is evident that illegal mining activities within communities do not yield positive effects on economic development. Several reasons support this conclusion: First, illegal mining operations go unregistered, leading to the neglect of tax obligations that should be met by business entities. This oversight represents a significant loss for both central and local governments. Second, the fact that mining serves as an inherited livelihood often results in a

reluctance to acquire additional skills through formal or informal education. Miners tend to rely solely on their knowledge of mining, which they gather from their surroundings. Third, economic development necessitates a balance between income generation and environmental sustainability. Illegal activities typically result in limited government oversight of business operations, including community mining.

A crucial post-mining activity is reclamation, which serves to preserve the environment and prevent erosion. Failure to carry out proper reclamation can lead to environmental damage and pose a threat to the local community. The key to addressing illegal mining is effective supervision of mining excavations and activities, which can prevent irregularities, especially in community mining (Karjoko et al., 2021).

In a case study conducted in Ghana (Suglo et.al, 2021), it was observed that illegal mining had caused severe environmental damage to the point where certain areas could no longer be inhabited due to improper management of former excavations. This resulted in water and air pollution and even posed a risk of fires. Another study, also focusing on Ghana, explored the importance of mining for the Ghanaian economy, where it significantly contributes to the GDP and job creation. Nonetheless, there are negative health impacts on the surrounding community, including an increased risk of diseases such as malaria, skin conditions, diarrhea, fever, and respiratory illnesses. In addition, there is a

heightened risk of HIV/AIDS transmission within the context of prostitution in mining communities.

The environmental consequences of mining are multifaceted and include various negative impacts, such as noise pollution, stemming from the heavy trucks and machinery used at mining sites. Water pollution, caused by chemicals like arsenic, mercury, and cadmium used in mineral purification processes, poses a significant threat to the environment. Agricultural soil contamination with heavy metals and other pollutants leads to land degradation, making it unsuitable for farming and affecting food productivity. In addition, mining activities often result in the clearing of forested areas, disrupting the natural habitats of numerous animal species and leading to reduced wildlife populations (Emmanuel, Jerry, & Dzigbodi, 2018).

Natural resources serve as a critical asset for a nation's development due to their substantial economic value. Thus, the government must ensure their optimal utilization while also prioritizing environmental preservation. This focus on safeguarding the mining environment is crucial to prevent permanent damage and the loss of economic value

### **3. Legal Critical Analysis of Community Mining Activities in Bangka Regency**

Being a nation blessed with abundant natural resources, Indonesia faces a duality in the impact of exploring and exploiting these resources (Sukarman, Gani, & Armansyah, 2020). This equatorial country enjoys a substantial economic surplus from its extensive mining

sector, significantly contributing to its development efforts. However, this economic boon is not without consequences, as it leaves behind an expanding footprint of environmental damage. One of the regions burdened by this ecological toll is the Kepulauan Bangka Belitung Province, Indonesia's 31st province, which only gained separation from South Sumatra in 2001. Known as '*Timah Island*' due to its status as an archipelago with the world's second-largest tin mineral reserves, Bangka Belitung has witnessed 300 years of mining, resulting in severe environmental degradation.

In Indonesia's regulatory framework, the 1945 Constitution of the Republic of Indonesia (UUD NRI 1945), Article 33, paragraphs (2) and (3), prescribes that production sectors vital for the state and affecting the livelihood of the people at large are to be under state control (Redi, 2016). This also extends to land, water, and the natural resources therein, all to be managed for the maximum well-being of the people. In line with these constitutional provisions, the utilization of non-renewable natural resources, like mining, must be carried out in an integrated, optimal, efficient, transparent, sustainable, and environmentally responsible manner, ensuring fairness in the process.

To adhere to the stipulations of Article 33, paragraphs (2) and (3) of the 1945 Constitution of the Republic of Indonesia, the government has enacted various laws, beginning with Law No. 11 of 1967 concerning Basic Mining Provisions. This legislation has been subsequently refined by Law

No. 4 of 2009 concerning Mineral and Coal Mining and amended by Law No. 3 of 2020, which introduced amendments to Law No. 4 of 2009 concerning Mineral and Coal Mining (Putri, & A.L.W, 2015).

Community Mining Areas (WPR), as defined in Article 1, paragraph 32 of Law No. 4 of 2009 concerning Mineral and Coal Mining, represent segments of mining areas where community mining business activities are conducted. Article 22 of Law No. 3 of 2020 concerning Mineral and Coal Mining delineates the criteria for areas within mining regions that can be designated as WPR. These criteria include the presence of secondary mineral reserves in rivers and riverbanks, primary reserves of metal minerals up to a maximum depth of 100 meters, terrace deposits, floodplains, and ancient river deposits. The designated maximum area for WPR is 100 hectares, and it should specify the commodity to be mined while also adhering to the prescribed criteria for space and area utilization for Mining Business activities under legal provisions.

These conditions create significant hurdles for local communities to obtain permits, especially considering that permit issuance is under the purview of the central government, specifically the Minister of Energy and Mineral Resources. When examining Law No. 3 of 2020 concerning Minerals and Coal, it becomes evident that there are multiple irregularities in the ratification of this law (Juaningsih, 2020). Firstly, the latest Mineral and Coal Law breaches Article 5, Section G of Law

No. 15 of 2019, which concerns the Formation of Legislation. The revision of the Minerals and Coal Law was conducted in a non-transparent, closed manner. Secondly, the public perceives that the Indonesian Parliament (DPR RI) exploited the opportunity during the COVID-19 outbreak by not prioritizing more urgent concerns over passing the Mineral and Coal Law. Thirdly, several Articles in the Minerals and Coal Law were abolished for unclear reasons, such as Articles 7, 8, 37, 43, 44, 45, 142, and 143, which more or less diminish regional authority (Governor, Regency/Mayor) in mineral and coal mining management, posing a potential threat to the principle of decentralization. Of utmost importance is the removal of Article 165, which previously related to criminal sanctions for individuals who abuse the authority to issue mining permits, including IUP, IUPR, IUPK. The fourth issue pertains to sociological data among communities affected by environmental impacts such as floods, air pollution, loss of forests, and even fatalities resulting from the government's negligence in addressing mining holes in local areas.

The economic dependence of the Bangka Belitung community on the tin sector has led to various problems (Ibrahim, Haryadi, & Wahyudin, 2019). One prominent issue is the surge in illegal mining activities, characterized by mining practices devoid of clear permits, proper procedures, equipment, and safety standards. Typically conducted by the general public and without adherence to government-established mining standards, this illegal mining is causing

extensive environmental harm. Such actions contravene Minerals and Coal Law No. 3 of 2020, as specified in Article 158, in conjunction with Article 159 and Article 161 regarding illegal mining.

Inconsistencies in legal principles exist both vertically between Law No. 23 of 2014 concerning Regional Government and the principles outlined in Article 33, Paragraph (3), Articles 18, and 18A of the 1945 Constitution, as well as horizontally with Law No. 4 of 2009, amended by Law No. 3 of 2020 concerning Mining Minerals and Coal. These inconsistencies significantly affect the effectiveness of fostering and overseeing community mining businesses concerning their environmental impacts (Prianto et al. 2019).

The continuous exploitation of resources without a reclamation planning program will undoubtedly exacerbate environmental degradation in Bangka Belitung. This exploitation has left behind excavated holes, deforested lands, and damaged habitats in the region. According to data from the Central Bureau of Statistics for the Kepulauan Bangka Belitung Province in 2014, the area classified as very critical to potentially critical encompassed nearly 2 million hectares, a figure that will keep rising unless concrete efforts are made to reclaim these critical lands (Syahrudin, 2021).

Meanwhile, the sanctions relating to mining and environmental permits that have so far been implemented are still encountering various difficulties (Merdekawati, & Triatmodjo, 2022).

The dilemma that arises is that large-scale control can have an impact on the community economy, whereas if illegal mining is not regulated, it will proliferate and accelerate the degradation of productive land and the environment in Bangka Belitung. The applicability of law is always limited by the situation or environment in which the law exists, so that is common when there is a discrepancy between what should it be (*das sollen*) and what happened (*das sein*).

In such circumstances, it is imperative for both the government and society to actively explore reliable alternative solutions to address contemporary issues by incorporating concepts that can be effectively applied in our communities. One promising approach is the integration of local wisdom on environmental preservation through regional regulatory mechanisms.

Local wisdom, deeply ingrained in customary norms, has evolved in tandem with societal development, shaping the prevailing community attitudes towards the environment and their way of life. Within the context of Bangka Belitung, which is classified by Van Vollenhoven as one of the nineteen customary law areas (*adatrecht*), numerous forms of local wisdom stand out as potential candidates for implementation. Notably, the "adat" laws of *Rimba Bulin* and *Tin Ampak* holds significant promise.

The *Rimba Bulin* tradition serves as a sanction mechanism rooted in local customs and wisdom, designed to safeguard the environment. The *Bulin* forest, regarded as a sacred and mystical place, symbolizes ancestral heritage for



the *Mancung* Community, necessitating its preservation. The Rimba Bulin traditional ritual, upheld by the *Mancung* Village Community in Kelapa District, West Bangka Regency, is a living testament to the importance of these customs. It was organized in response to certain community members violating their traditions by engaging in non-conventional mining activities within the *Rimba Bulin* Indigenous Forest.

*Rimba Bulin* customary law is a unique and essential form of local wisdom that plays a pivotal role in regulating deviant behavior within the local community (Susilo & Maemunah, 2009). Unfortunately, the regional government has yet to formally recognize and incorporate this valuable wisdom into its legal framework, whether through regulations or statutes. This oversight undermines its sustainability and potential for development, despite being followed by the community with full awareness, for the sake of environmental preservation (Rahayu et al., 2023).

Another noteworthy instance of local wisdom in Bangka Regency is the concept of "*Tin Ampak*," which revolves around the belief that specific areas have been sanctified or designated as off-limits for mining activities. This tradition is driven by the objective of ensuring that future generations can continue to enjoy the benefits of the environment without suffering the adverse consequences of resource exploitation.

In summary, the integration of local wisdom into regional regulations presents a promising solution for addressing contemporary challenges. Acknowledging and formalizing these

traditions within the legal framework serves to not only preserve cultural heritage but also significantly contribute to sustainable environmental management and the well-being of the community.

The presence of deeply ingrained local wisdom, which is effective in shaping social behavior within this local environment, holds considerable potential. Local wisdom can indeed offer a promising solution and approach, contingent on the effort to solidify its normative foundations for alignment with positive law. This endeavor can be pursued by incorporating models of local wisdom concerning environmental preservation into the legal framework of Regional Regulations (*Peraturan Daerah/Perda*).

#### D. CONCLUSION

Mining activities in Bangka Regency are undeniably a cornerstone of the local economy. For many residents, mining is not just a livelihood but a vital source of income. This individual-driven approach to mining positively impacts the economic growth of the Kepulauan Bangka Belitung Province, particularly in the context of Bangka Regency.

However, it's crucial to consider the multifaceted impact of these activities on economic development. Firstly, the proliferation of illegal mining is a concern as it results in unregistered taxpayers, causing financial losses to the state. Secondly, the prevalence of illegal mining can hinder human resource development as it often operates in informal and unsafe

conditions. Lastly, there is a notable lack of oversight over reclamation efforts conducted by artisanal miners, potentially leading to environmental issues.

From a legal perspective, the updated requirements for Community Mining Areas outlined in Law No. 3 of 2020, which include the criteria related to the location, reserves, and utilization of the mining area, have presented challenges for local miners. As this law designates the central government as the sole authority to issue mining permits, it has contributed to the widespread practice of illegal artisanal mining.

To address these issues effectively, the government should strive for fair and balanced law enforcement, benefiting both the community and itself. In addition, leveraging customary laws that are deeply ingrained in the local culture, such as the *Tin Ampak* tradition and the *Rimba Bulin* forest law, can serve as the preventive measures to mitigate the adverse consequences of mining activities.

Adding to this discussion, the data from the 2021 Economic Report Book of Bangka Belitung Province, as published by Bank Indonesia (Nugraheni, 2021), reveals that the province's economy has experienced positive growth. This growth can be largely attributed to the expansion of tin mining and quarrying businesses, along with favorable market prices for mining products. Community mining plays an indispensable role in driving the economic dynamics of Bangka Regency. Despite potential

preferences for other livelihoods, the socio-economic constraints faced by the community make mining their primary, and often sole, viable option.

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